

### REMARKS

The Applicant has amended the Abstract of the Disclosure to reduce the word count to below the 150 word limit.

The Claims have been amended to overcome the 35 U.S.C. 112 rejections.

When the original claims were filed it was intended that a "Claim 3" be filed which was not included. This caused the claim objections to original Claims 5-8. Claim 2 has been amended to eliminate words from the missing "Claim 3" that were placed into Claim 2. New Claim 4 has been added to replace the originally missing Claim 3. Claim 1 has been amended also to eliminate the 35 U.S.C. 112 rejection applied to it.

The Specification on Page 7, lines 19-20 has been amended to eliminate the 35 U.S.C. 112 applied to it.

The step of dividing the collection of said particle state data by the number of particles is known to those of ordinary skill in the art. The equation on Page 3, line 30 in the Background section is also known to those skilled in the art to accomplish this step.

The Claim 35 U.S.C. rejections are all based on Salut patent no. 5,933,352 in view of the Ballantyne et al article entitled "Novel Branching Particle Method for Tracking". The cited Abstract of this article was published in July, 2000. The Abstract fails to disclose the Applicant's invention in sufficient detail to teach a person of ordinary skill in the art how to modify Salut to obtain the claimed invention. Moreover, there is no suggestion that the teaching of the article and Salut should be combined. The Salut patent is for estimating the state of a dynamic process in real time. It teaches nothing that prevents a patent from issuing on the particle tracking filter claims of the applicant. The present application was filed on June 13, 2001 with one of the inventors, Michael Kouritzin, as a co-author. The Ballantyne et al. publication in July 2000 is not a valid prior art reference because the present application was filed less than a year after the publication.

The Applicant therefore traverses all of the rejections of the last Office Action and requests an early allowance of a patent.

Respectfully Submitted,  
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